NWS Fire Weather Services

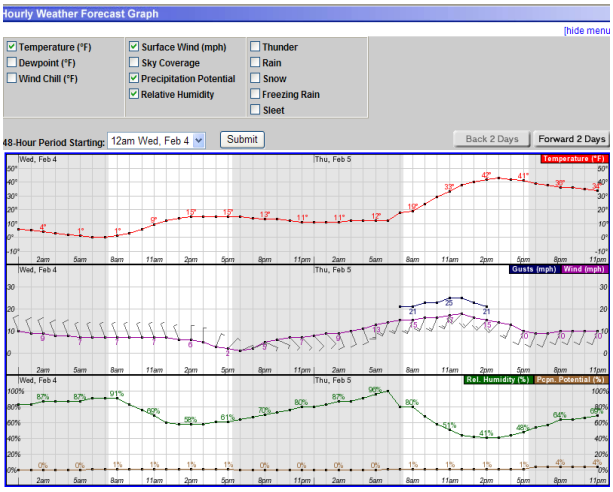
NOAA NATIONAL WEATHER SERVICE January 2010

Support for Decision Makers

NWS Forecast offices around the U.S. provide a variety of fire weather services, based primarily on local needs. In the western U.S. for example, it is typical for Incident Meteorologists to provide on-site support to fire fighters involved in wildfire management. In other areas, governmental agencies commonly need specialized forecasts in support of prescribed burns, also known as "Spot Forecasts".

Spot Forecasts for Prescribed Burns

In 2002, the NWS Quad Cities began issuing Spot Forecasts for two Federal land management areas in the local service area. Since then, the Spot Forecast Program has grown to include other government managed or co-managed land. To be eligible for spot forecasts, the requesting party must be a government entity and there usually is a public safety interest. Spot forecasts are provided for pre-determined locations. Through a web site, the requesting agency provides basic, local meteorological conditions and the time frame of concern. Typically within 30 minutes, they receive their specific spot forecast via the web page.



Information to Support Decision Makers

In 2009, the NWS Quad Cities began providing information to support officials who must decide whether to implement local burn bans. Based on local customer input, the primary tool for conveying this information will be the Hazardous Weather Outlook. When the fire danger is very high or extreme (see GFDI below), a section will be added to the Hazardous Weather Outlook providing the details. Also, a Rangeland Fire Danger Statement will be issued during the dry seasons, providing fire danger categories for each county in the service area.

For specific weather conditions, the Hourly Weather Graph, available through the web page, provides a detailed forecast of critical parameters such as humidity, temperature, and wind for up to 7 days for a specific point.

Introducing the GFDI

The Grassland Fire Danger Index or GFDI is an experimental index originally developed in Australia. It has been adapted for use in the U.S. and quantifies the potential for grass fires to become difficult to contain. The GFDI incorporates temperature, humidity, wind, and the state of the vegetation into the calculation, and rates conditions on a scale from Low to Extreme. During dry periods, the GFDI is available in both graphical and text formats via the web page.

GFDI Categories
Low
Moderate
High
Very High
Extreme

Fire Weather Spotters

Volunteers scattered across the NWS Quad Cities service area provide weekly updates on the state of vegetation during dry seasons. These reports are used in the GFDI calculation.

On the web:

National Interagency Fire Center ..... www.nifc.gov
NWS Quad Cities Fire Weather Page ..... www.crh.noaa.gov/dvn/?n=fireweather
NWS National Fire Weather Page ..... fire.boi.noaa.gov/firewx.htm